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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,438	06/28/2004	Hsuan-Ming Shih	88538.0002	2424
26021 7590 12/28/2007 HOGAN & HARTSON L.L.P. 1999 AVENUE OF THE STARS SUITE 1400 LOS ANGELES, CA 90067			EXAMINER HAILEMARIAM, EMMANUEL	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/500,438

**Applicant(s)**

SHIH, HSUAN-MING

**Examiner**

Emmanuel Hailemariam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 23-29 and 35-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (US 2003/0122774) in view of Binstead (US 6137427).

**As to claim 23**, Harada discloses, **a touch control display screen(fig.1(1) [0029] )** with built-in membrane antenna array lattice **(fig.2(10) electromagnetic induction layer** (see, fig.1 and 2(10)), [0029],

Including at least a **display screen (fig.1 (10,12)** and a shell **(see fig.1(1) display screen depicted housing element (12))**;

wherein an induction layer is provided in the rear of the display screen **(see fig.2(10) )**,

the output of the induction layer is connected to an **induction control circuit (fig.3 (52)(10) [0033]**,

a display screen control circuit is also provided in the shell **[0029]**.

Harada does not disclose the said induction layer is the antenna array printed on the insulation membrane and arranged along the X, Y axes, therein the area enclosed by each lattice unit constitutes one induction cell.

However, Binstead teaches the said induction layer may be the antenna array

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printed on the insulation membrane (col. 7 lines 52-60) and arranged along the X, Y axes (col. 2 lines 26-33), therein the area enclosed by each lattice unit constitutes one induction cell (fig. 4 (45)), in a like display device as taught by Harada.

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have incorporated the induction antenna array of Binstead into Harada's touch control display screen, because this will allow Harada's touch control display screen to prevent incidental electrical contact as suggested by Binstead (col. 7 lines 52-57), and Binstead's device is of the kind taught by Harada.

**AS to claim 24**, Binstead discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: a shield layer is provided after the induction layer in order to enhance the anti-interference ability of the device (col. 2 lines 58-62).

**As to claim 25 and 26**, Binstead discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: a buffering/space layer is also provided between the induction layer and the shield layer (fig. 1 (18, spacing)), (col. 4 lines 51-56, col. 8 lines 42-49)).

**As to claim 27**, Binstead discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by : by said induction layer may be the antenna array formed by etching the copper-platinum covering the insulation membrane (col. 4 lines 47-62).

**As to claim 28**, Binstead discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: said induction layer is an antenna array formed by the silver-plasm or the mixture material of the silver-plasm (col. 4 lines 47-62).and the carbon-plasm which is printed on the insulation membrane (see abstract, fig. 1 (10)); the said induction layer can be printed on two surfaces of the insulation membrane (see abstract, fig. 1 (10)); or printed on one surface of the insulation membrane, and there are two layers of insulation membrane in which one is overlaid on the other (col. 3 lines 43-61).

**As to claim 29**, Binstead discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said insulation membrane is made by film material (see.fig.2C (10); (col. 4 lines 11-21).

**As to claim 35**, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said induction control circuit is positioned outside the body (it would be an obvious to one having ordinary skill in the art to place the display screen control circuit outside the touch control display screen for the commonly understood benefits of improving interchangeability), and connected to the body through the electrical connection means (it would be an obvious to connect these element through an electrical means for the unit to appropriately function); the output of the antenna array of the induction layer is connected with the output interface of the induction layer

by means of pressure connection, plug-in connection, or welding- connection (it would be an obvious to one having ordinary skill in the art use nay of these connections as they are well known and commonly used in the art, and use of one over the other is a mere matter of manufacturing cost determinations and design structure);

an interface which can match the electrical connection means of the induction layer is provided on the control circuit (it would be an obvious to one having ordinary skill in the art the time of invention to match interfaces in order to ensure the commonly understood benefits of compatibility of elements for proper functioning of the device, a common goal within the art).

**As to claim 36**, Harada discloses a touch screen with built-in wire lattice electromagnetic induction layer according to claim 35, characterized by: the said output interface of the induction layer and the interface of the control circuit is one of the following: pin-type connection means, flexible printed circuitry means, PIN-PIN connection means, welding spot (VGA) thermal-melted connection means, ultrasonic welding device, solder-plate welding device, puncture-type connection means (fig.3 (VGA (38)),[0030]) (it would be an obvious to one having ordinary skill in the art to use any of these connections as they are well known and commonly used in the art, use of one over the other is a mere matter of manufacturing cost determinations and design structure).

**As to claim 37**, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: a protecting layer is provided in the front of the said display screen

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(fig.2 (10); [0029]).

As to claim 38, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said display screen is a plasma display screen or a liquid-crystal display screen [0004].

3. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (US 2003/0122774) in view of Binstead (US 6137427) in further view of Ely et al. (US 6249234).

**As to claim 30**, Binstead does not teach said induction layer consists of two or more layers, and the induction cells on respective induction layers are set to interlace each other.

However, Ely discloses said induction layer consists of two or more layers (col. 8 lines 20-31), and the induction cells on respective induction layers are set to interlace each other (see fig. 24 (193,195,197), col. 24 lines 14-26).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have incorporated said induction layer and the induction cells of Ely into Binstead's touch control display, because this will allow Binstead's touch control system to respond timely and accurately.

**As to claim 31**, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 23, characterized by: the said components of the induction control circuit are mounted on a printed substrate which is separated from the induction layer (fig.3 (52); [0033], the output of the antenna array of the induction layer is connected to the corresponding input terminal on the printed substrate by means of pressure-connection, plug-in connection or welding-connection [0006,0008].

4. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (US 2003/0122774) in view of Binstead (US 6137427) in further view of Keely et al. (US2002/0063694)

**As to claim 32**, the teaching of Binstead and Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to the said output of the antenna array. However Binstead in view of Harada does not teach the induction layer is positioned between a hard sheet and a printed substrate; a buffering layer is provided between the hard sheet and the output of the antenna array; the hard sheet, the buffering layer and the output of the antenna array are overlaid on the printed substrate.

However, Keely discloses the induction layer is positioned between a hard sheet and a printed substrate (fig. 1 (element (64))), a buffering layer (fig.1(36) is provided between the hard sheet (fig.1(34) and the output of the antenna array (fig.1 (60)) [0032],[0037]) the hard sheet, the buffering layer and the output of the antenna array



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are overlaid on the printed substrate ( see fig.1 ) by means of the screwing-conjunction *(it would be obvious to one having ordinary skill in the art at the time of the invention to attach said layers by a means of screwing, or twisting and pressing to gain the commonly understood benefits of a stronger bond between the layers)*; the output of the antenna array is connected with corresponding input terminal *(it would be obvious to one having ordinary skill in the art at the time of the invention to connect output antenna array to input in order to receive and convey signal in order to allow the device to function properly)*.

**As to claim 33**, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 32, characterized by: the said printed substrate is the printed substrate of the display screen control circuit in the body of the display screen [0033].

**As to claim 34**, Harada discloses a touch control display screen with built-in membrane antenna array lattice electromagnetic induction layer according to claim 32, characterized by: the said printed substrate is the printed substrate of the display screen control circuit outside the body of the display screen, or a self contained unit, otherwise it is set on the main board of PC; the connection between them is achieved by line or cable (see fig.3 [0028], *(it would be an obvious to one having ordinary skill in the art to use any of these connections as they are well known and commonly used in the art ,and use of one over the other is a mere matter of manufacturing cost determinations and design structure)*).

### **Correspondence**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Hailemariam whose telephone number is 571-270-1545. The examiner can normally be reached on M-F 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-270-1550. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

E.H

03/30/07

  
AMARE MENGISTU  
SUPERVISORY PATENT EXAMINER